

# PM304 Bushings Used in Furnaces

*Lincoln Electric, Euclid, Ohio and ADMA, Twinsburg, Ohio*



## TECHNOLOGY

PM 304 belongs to a generic family of lubricant materials called PS 300. These oil free lubricants are capable of withstanding extremely high temperatures, unlike other existing lubricants. PM304 is a powder which is pressed, shaped, heat treated, and then applied as a solid part to bushings.



***PM304 Bushings***

## COMMERCIAL APPLICATION

- ◆ ADMA manufactures bushings made with PM304 material
- ◆ Lincoln Electric will use bushings with PM304 material in furnaces which operate at temperatures up to 1000°F. Previously, bushings would crack when used in a furnace and oils and greases could not be used as lubricants because they would burn up.

## SOCIAL / ECONOMIC BENEFIT

- ◆ Bushing Life span increase from 1 month to at least 6 months
- ◆ Eliminates the need to shut down assembly lines every month for repair or replacement, resulting in decreased maintenance cost and increased production

## NASA APPLICATIONS

- ◆ The technology was originally developed for the GAP (General Aviation Propulsion) program which set out to revitalize the U.S. commercial light aircraft industry.

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